

## TRANSPORT INFORMATION SERVICES



OASIS 'age-friendly' Transport Information Services are designed to facilitate journey planning. The aim is to encourage older people to take part in social, leisure or work-related activities outside the home and to avoid isolation.

Two specially enhanced trip planning tools have been developed, one for public transport, the other for multimodal trips. These take into account the particular needs of older people, making it possible, for instance, to request a route in which all buses or trains have easy access (low-step entry) or involve a minimum number of changes. The route description can also be transferred to a mobile device for assistance during the trip.

The system is fully integrated with pedestrian and car routing applications, so the same service can be used as support for all parts of a multimodal trips.

## PERSONAL MOBILITY

OASIS has developed in-vehicle services for older drivers and passengers that exploit and extends the functionalities of in-vehicle platforms. A medical assistance and emergency call service allows remote user assistance through OASIS user profiling as well as through the connectivity between car and health sensors worn by the user. A special navigation service can download safe or calm routes which are then used by the in-car navigator, to guide the user to the destination in the most suitable way. Visual interaction on a smart phone is combined with tactile and vocal commands of the car system, allowing the user to keep their hands on the steering wheel and to drive safely all along the route.



## TRANSPORT ROUTE GUIDANCE



OASIS offers a routing and guidance application for pedestrians and car drivers which specifically tackles the challenges older people face in traffic. Restricting factors for older people's mobility include access to information, declining vision and hearing, declining motor skills and cognitive restrictions.

To enable older people to safely walk or drive, the OASIS Transport Route Guidance application addresses these aspects by considering suitable routing characteristics, by using highly accurate map

material that can be edited, and by offering an easily understandable user interface.

Users access the planned route on their mobile devices. The application enables user to:

- **View maps:** displaying their current location on the map, including information about points of interest adapted to the needs of older people;
- **Access the planned route:** access information at all stages of the planned route, by car, pedestrian and public transport routes;
- **Plan new pedestrian routes:** users are able to plan and recalculate routes in order to increase safety or the ease of a walk;
- **Receive navigation advice for pedestrians' routes:** directions are given to users referring to their exact current location.

## SMART WORKPLACES



The OASIS Smart Workplaces service encompasses a set of context-aware technologies that enable older people to work from anywhere at any time:

- **Securely**, in terms of secure access to business portals and information, but also in terms of protecting their health against excessive stress or fatigue;
- **comfortably**, with interfaces providing high usability and intelligent content retrieval functionality and
- **seamlessly**, with a working session remaining uninterrupted while changing device or work location or while using other services.

OASIS "smart workers" will be able to complete their work properly and efficiently, whether they work from home or on the move with fewer resources than necessary for other work set-ups. OASIS Smart Workplaces will help users to organise their work and ensure that all data as well as emails are available with limited effort, and user-friendly system messages.

## THE OASIS CONSORTIUM

The OASIS Consortium is composed of 31 Partners from 11 countries (Austria, Belgium, China, Germany, Greece, Italy, Mexico, Romania, Spain, and United Kingdom). Large industries (7), SMEs (6), Universities (5), Research Centers (8), Non-Profit Organisations (3), Public Organisation (1) and Healthcare Center (1) are all represented.

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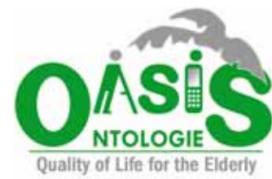
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The «e-Inclusion: be part of it!» campaign is organised by the European Commission. More information on this action is available at [http://ec.europa.eu/information\\_society/einclusion](http://ec.europa.eu/information_society/einclusion). The European Commission bears no responsibility for, nor is it involved in, the events, documents or other manifestations associated or claiming to be associated with the campaign, unless indicated otherwise.



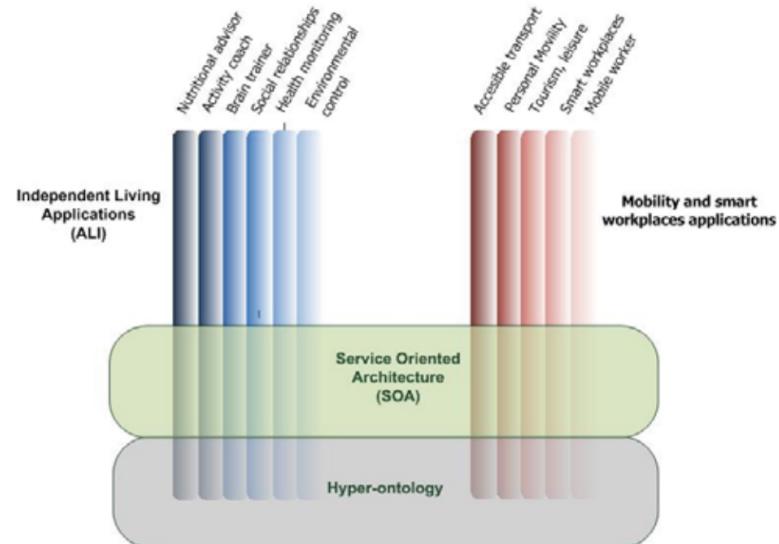
## Services for beneficiaries





## OASIS IN BRIEF

OASIS is a European research project with the aim to improve the quality and enhance the usability of services for all daily activities of older people. More specifically, OASIS makes use of Information and Communication Technologies (ICT) and other key technologies to provide holistic services to older people, supporting their physical and psychological independence, stimulating their social or psychological engagement and fostering their emotional well-being. OASIS addresses key areas of activity, encompassing independent living and socialising, autonomous mobility, and flexible workability.



## OASIS SERVICES FOR INDEPENDENT LIVING

### NUTRITIONAL ADVISOR



The OASIS Nutritional Advisor is an application for the kitchen that helps older people to lead healthy and autonomous lives, influencing their nutritional habits through customised menus and food tips, while also facilitating shopping and cooking. All the nutritional information provided is supervised by a nutritional expert.

#### The Nutritional Advisor offers:

- **weekly menus** according to the user's nutritional profile: likes & dislikes, food allergies and health status. Users can partially modify these menus;
- **nutritional tips** depending on the user's personal situation and needs, such as "remember to take your pills after eating" or "remember to drink enough water" when it's really hot;
- **shopping lists** created on the basis of the suggested weekly menu: the list can be printed or sent to the mobile phone, to avoid forgetting it;
- **easy recipes** with nutritional values and instructions for cooking the planned meals.
- **an enhanced** experience by discussing and sharing receipts with friends: the Nutritional Advisor can be integrated into the OASIS Social Community service.

## OASIS SERVICES FOR INDEPENDENT LIVING

### BRAIN TRAINER



People experience forgetfulness at some point in their lives, and as they grow older, the human memory's capacity declines. Current research suggests that the loss of brain cells is not irreversible and that brain training with different games and tests may help to exercise one's memory and concentration. Brain training helps people to understand the status of their memory, and using brain exercises can strengthen their focus and concentration.

The OASIS Brain Trainer is a memory training application with features based on the realistic challenges of daily life. The user is allocated to a training level (beginner, intermediate, advanced) according to their profile. The Brain Trainer will stimulate the user's mind in a fun and relaxing way as they can choose and change games at any time or any place. A fun card sorting game, for example, can easily be started and played as a quick memory game. The application provides scores according to reaction times and mistake rates. Playing for only five minutes a day will tackle the user's memory and reaction skills.

## OASIS SERVICES FOR INDEPENDENT LIVING

### HEALTH MONITORING



The OASIS Health Monitoring System (OHMS) goes beyond monitoring health status. It manages older people's health and assures their well-being, while also allowing them to continue the rest of their daily-life activities. The four main functionalities of the OHMS are:

- **Health profile management:** keeping a user's detailed health profile up-to-date.
- **Health remote monitoring:** recording and controlling the user's biomedical parameters and daily activities by means of six wireless sensors.
- **Health coach:** supporting the older user by making him aware of the benefits of a healthier lifestyle, providing medical education and helping him to follow the therapy prescribed by the doctor. Contacts with the general practitioners and with peers are facilitated and useful health-related addresses and links are provided.
- **Alerting and assisting the user,** relative or medical doctor, to notify them about important events such as the receipt of a new message from the doctor, a change in their treatment, or a warning about a potentially dangerous situation.

### SOCIAL RELATIONSHIPS

The OASIS Social Community service provides a way for older people to participate in social communities, while at the same time benefiting their independent living. This is through:



- **Experience and competence sharing:** retirement can affect personal social networks, while a person is still willing to participate in and have an impact on society with their experience and competence. Collaborative spaces and discussion forums provide a framework to develop new activities and share knowledge and experience.
- **Connected family and friends:** eases the access to information and brings family and friends "closer". It includes easy-to-use tools that extend existing ways for staying in touch (phone, letters, e-mail), and provides means for more efficient group communication.
- **Travelling partner:** provides the user with support when travelling outside their usual environment. The system identifies the new environment, suggests nearby events and provides information in line with their interests and preferences.
- **Leisure and social activity co-creation:** shows information about occasional events, social networking, informal/formal networks, leisure clubs and associations, allowing searches while on the move.

### ACTIVITY COACH

The OASIS Activity Coach recognises everyday physical activities and characterises the user's habit and behaviour. Applying unobtrusive sensors, it calculates an activity index and performs a personalized assessment taking the user's health profile into account.



Additionally, the Activity Coach provides background information which encourages the users to adapt their movement habits and motivates them to undertake new activities.

This device can also detect falls and can alert, if necessary, a family member or medical professional. Furthermore, it includes a support system, which, for example, after a fracture, can measure muscular fatigue in order to support the healing process. Recommendations and warning messages - derived from the analysis of answers to psychological surveys - are personally adapted to the users. The Activity Coach can work in combination with other OASIS services such as the Environmental Control, Health Monitoring and the Nutritional Advisor applications. By using these services together, each of them enhances its own core services.

### ENVIRONMENTAL CONTROL & SMART HOME

The OASIS Smart Home Technology increases the comfort, security and safety of older people within their home environment. This is another tool to improve the quality of life and autonomy of the OASIS user.



The OASIS Smart Home Technology features:

- **Comfort:** Automatic and remote control of domestic goods like lamps, doors or windows;
- **Safety:** Monitoring of environmental parameters, like humidity or temperature. Supervision of safety-critical items like stoves or windows;
- **Security:** Monitoring of the environment, like the reminder to close a window or lock a door, or simulated actions to make intruders think that someone is actually present during a potential break-in;
- **Energy saving:** Energy efficient control of consumer products, e.g. lights, heating or ventilation;
- **Localisation** of users, e.g. in case of emergency conditions.